

# Fibre hybrid cable

## Type 3780K



### Construction characteristics

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<b>Fibre optic element</b>	Jelly filled steel tube (1.9 mm OD) with 8 off single mode fibre SM (9/125) type Strong bend-EX single mode fibre ITU-T G657.B2 Black polyethylene jacket to a nominal OD of 3.5 mm SM fibre colour white, yellow, green, blue, red, orange, brown, grey
<b>Conductor</b>	1.0 mm <sup>2</sup> (18 AWG) stranded tinned copper conductor with double layers of tecnopolymer compound insulation. Nominal OD 2.23 mm (7 each) Colour red, orange, yellow, green, blue, violet, brown
<b>Wrap</b>	Mylar tape
<b>Inner jacket</b>	Polyurethane 1.3 mm wall thickness. Colour red. Nominal OD 10.5 ±0.4 mm
<b>Strain element</b>	High strength textile braid
<b>Outer jacket</b>	Polyurethane 1.5 mm wall thickness. Colour red glossy
<b>European directives</b>	2002/95/CE (RoHS) and 2002/96/CE (WEEE)
<b>Haloen free</b>	Acc. to EN 50267-2-1 – IEC 60754-1

### Mechanical characteristics

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<b>Diameter</b>	16.0 mm ±0.40 mm
<b>Weight in air</b>	280 kg/km
<b>Weight in seawater</b>	80 kg/km
<b>Min. bending radius, static</b>	160 mm
<b>Min. bending radius, dynamic</b>	240 mm
<b>Safe working load</b>	10 kN
<b>Min. breaking strength</b>	50 kN
<b>Depth rating</b>	6,000 m
<b>Operating temperature range</b>	-20°C - +80°C

### Electrical and physical characteristics

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<b>Operating voltage</b>	3,000 V
<b>Test voltage</b>	6 kVA.c x 1 minute
<b>Electrical resistance 20°C</b>	≤ 20.4 Ω/km
<b>Insulation resistance 20°C</b>	≥ 1,000 MΩ x km

<b>Fibre attenuation (SM – dB/km)</b>	$\leq 0.38$ dB/km at 1,310 nm	
	$\leq 0.25$ dB/km at 1,550 nm	
	Mandrel radius 15 mm at 1,550 nm 10 turns	$\leq 0.03$ dB
	Mandrel radius 15 mm at 1,626 nm 10 turns	$\leq 0.10$ dB
	Mandrel radius 10 mm at 1,550 nm 1 turn	$\leq 0.10$ dB
	Mandrel radius 10 mm at 1,625 nm 1 turn	$\leq 0.20$ dB
	Mandrel radius 7.5 mm at 1,550 nm 1 turn	$\leq 0.50$ dB
	Mandrel radius 7.5 mm at 1,625 nm 1 turn	$\leq 1.00$ dB
<b>Proof test</b>	$\geq 100$ kpsi	